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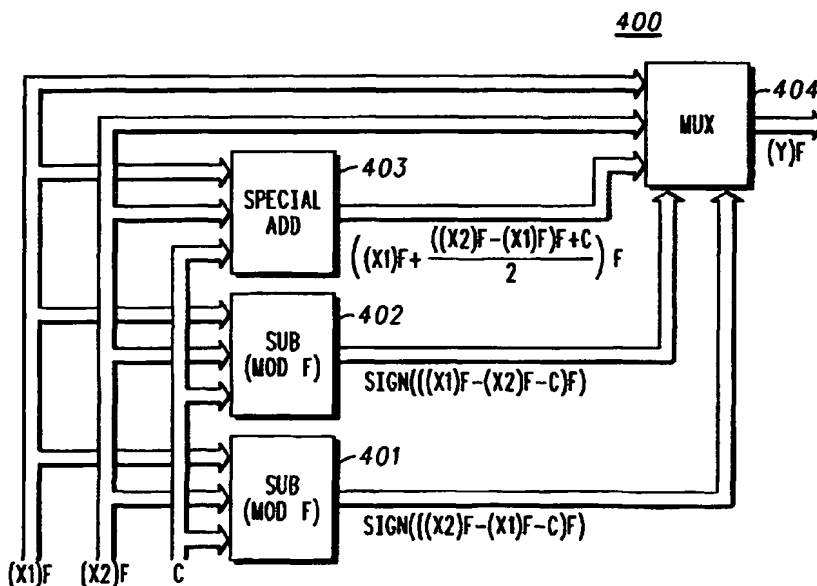
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(54) Title: LINEAR APPROXIMATION OF THE MAX* OPERATION FOR LOG-MAP DECODING



(57) Abstract: A LOG-MAP decoder for a wireless communication device, which uses modulo arithmetic and comprises a calculator for calculating the modulo of a linear approximation of a MAX* function; and a selector for selecting a MAX* output value from the group $a(n) \bmod F$, $b(n) \bmod F$, and the calculated modulo based upon a determination as to whether a predetermined threshold value for $a(n) - b(n)!$ has been met, where $a(n)$ is a first state metric, $b(n)$ is a second state metric, C is the predetermined threshold value and F is a value greater than $a(n) - b(n)!$.



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